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**Subject:** EPA ppt for 6/19 1:30pm EQC meeting  
**Date:** Tuesday, June 17, 2014 3:51:07 PM  
**Attachments:** [EPA Cold Water Protection Presentation.pptx](#)

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Hi Stephanie,

As in my voicemail, I'm sending you EPA's presentation for the 2<sup>nd</sup> day of the EQC meeting on June 19. EPA's presentation is part of the 1:30pm section following presentations from Gene/Josh and ODFW's.

Tony Barber and John Palmer will be speaking for EPA. I understand that the ppt will be pre-loaded, but we'll bring it on a thumb drive in case. If there's anything else you need, please feel free to let us at EPA know.

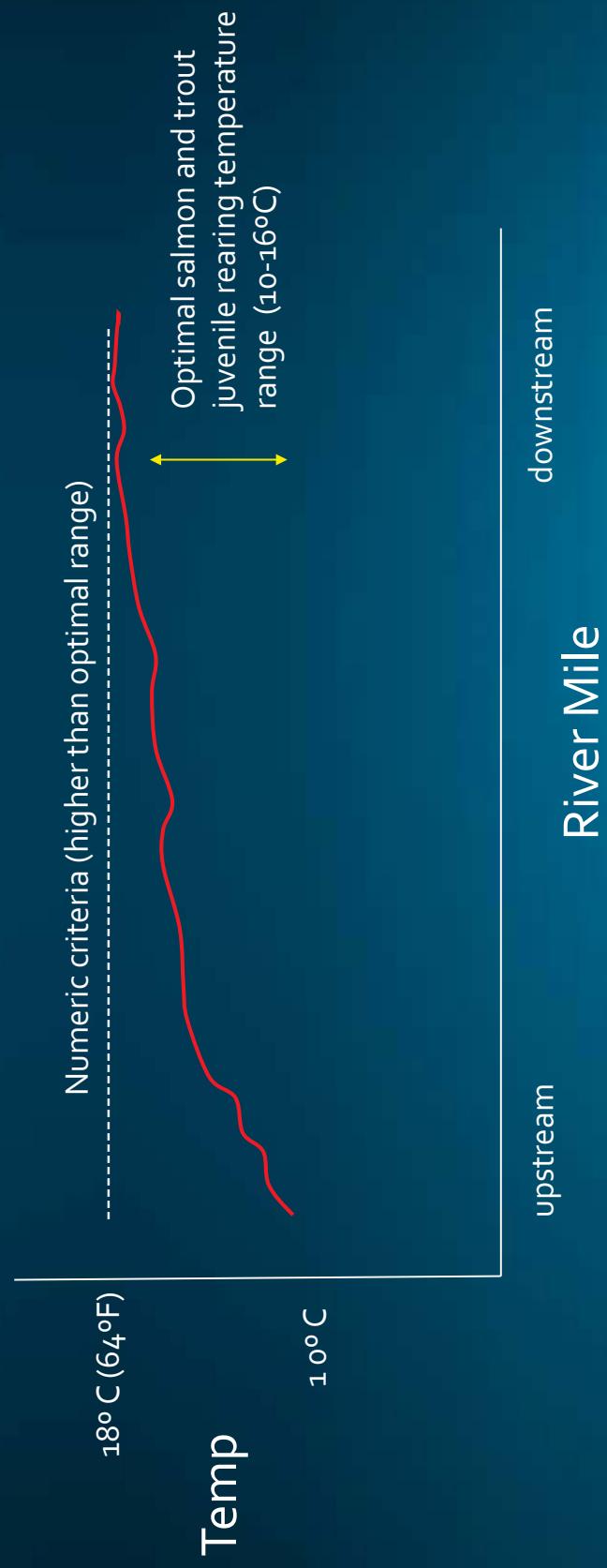
Thanks,

Jenny

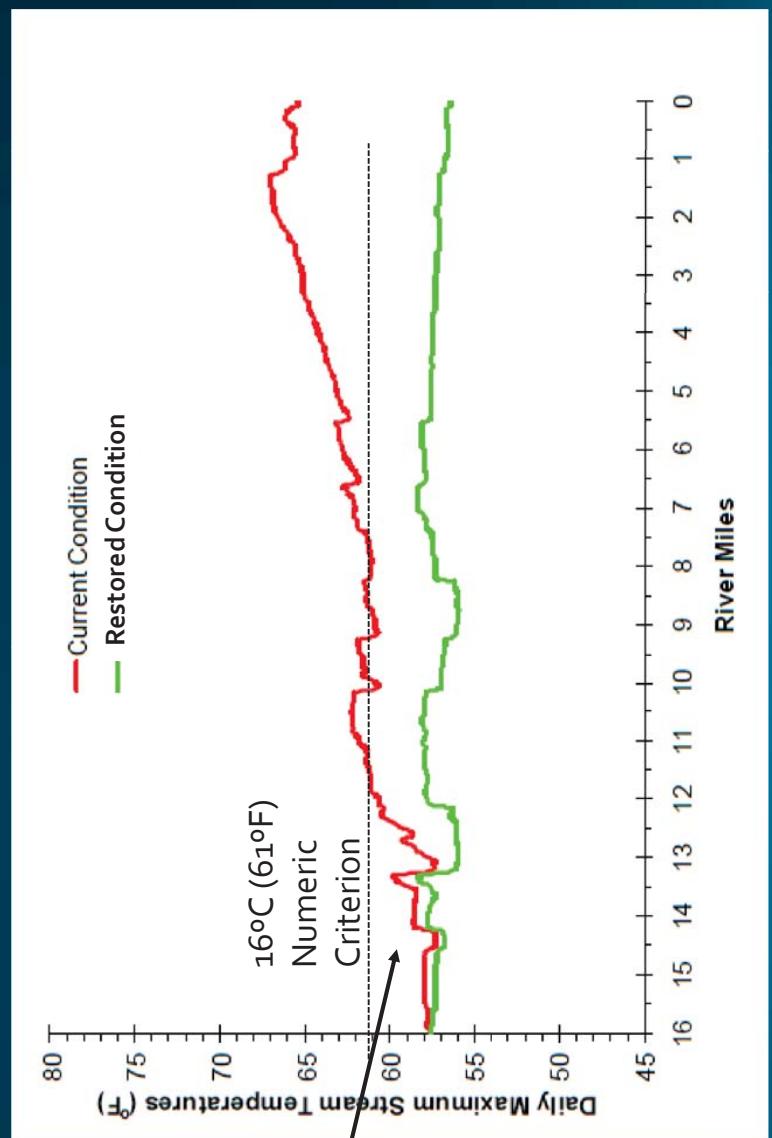
# EPA Pacific Northwest Temperature Guidance (2003)

- Joint effort with NMFS, FWS, States, & Tribes
- Technical team issued 6 peer-reviewed issue papers
- Policy team supported EPA in issuing two drafts for public comment
- Recommended temperature criteria to meet CWA & ESA
  - Numeric criteria to protect cold water salmonids
    - Additional water quality provision to maintain stream temperatures currently colder than numeric criteria (i.e., Protecting Cold Water criterion)
- Numeric criteria & PCW included in EPA's 2003 proposed rule & Oregon's 2003 temperature standard revision

# PCW Rationale #1 – Supports protectiveness of numeric criteria



## PCW Rationale #2 – Prevents further warming of downstream reaches



Anthropogenic upstream  
warming likely  
contributes to  
downstream  
exceedance of  
numeric criteria

Source: North Coast TMDL,  
ODEQ, 2003 – Salmonberry River

## PCW Rationale #3 – Protects last remaining high quality salmonid habitat

- Human activity has significantly warmed rivers and streams across the Pacific Northwest
- Summer rearing habitat truncated to higher elevations & summer migration in lower rivers is stressful/lethal
- Elevated stream temperature identified by NMFS/FWS as a limiting factor in the recovery of ESA-listed salmonids
- Protecting existing high quality habitat important for recovery
  - Predicted Climate Change impacts (1-2°C increase) makes this even more important

## Reduced Salmon/Steelhead Thermal Habitat - Common Pattern In Pacific Northwest Streams

Source: EPA Issue Paper 3 –  
Spatial and Temporal Patterns  
of Stream Temperature (2001)

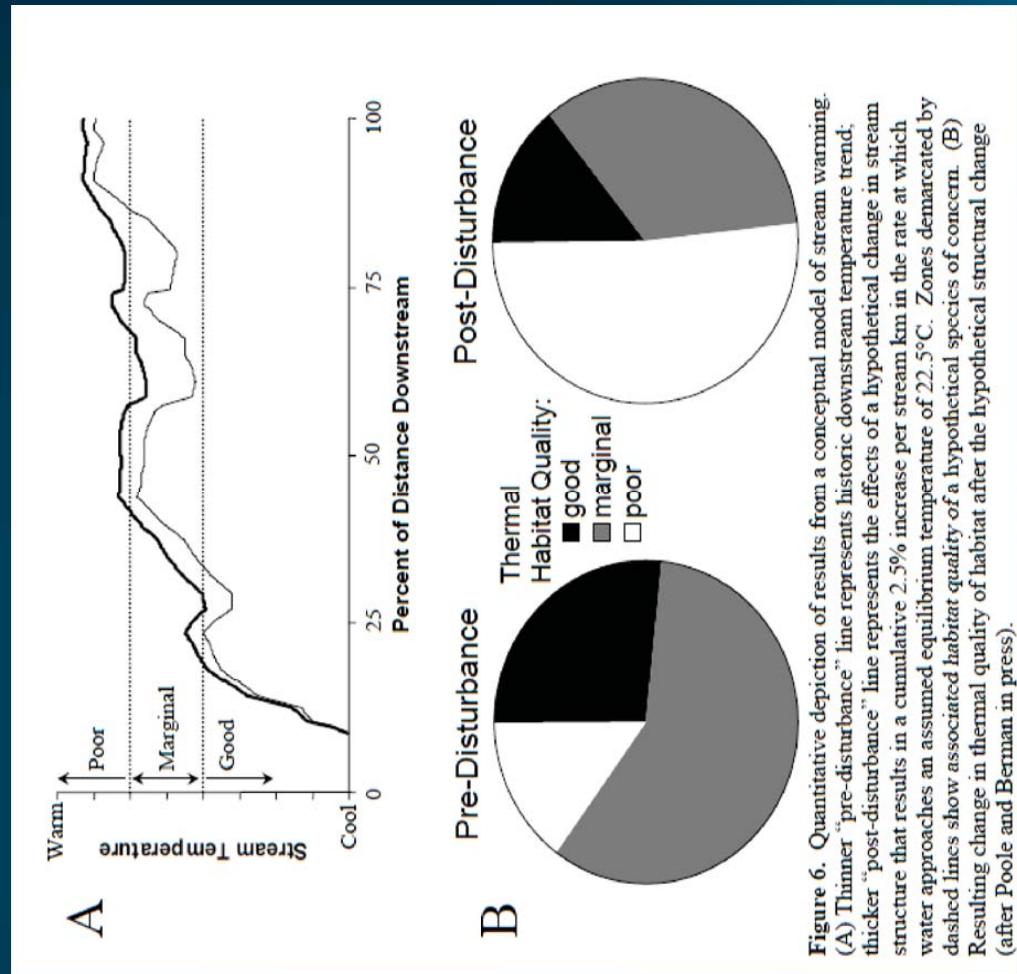


Figure 6. Quantitative depiction of results from a conceptual model of stream warming. (A) Thinner "pre-disturbance" line represents historic downstream temperature trend; thicker "post-disturbance" line represents the effects of a hypothetical change in stream structure that results in a cumulative 2.5% increase per stream km in the rate at which water approaches an assumed equilibrium temperature of 22.5°C. Zones demarcated by dashed lines show associated habitat quality of a hypothetical species of concern. (B) Resulting change in thermal quality of habitat after the hypothetical structural change (after Poole and Berman in press).